

jig is indexed to the position shown in Fig. 22. While in this position, 22 holes are drilled in the crankcase, and after these are completed the milling is done. The milling attachment for this drill jig consists of two members *D* and *C*. Part *C* consists of a body member for the milling attachment. In this member are cut vertical ways in which the cutter carrying member *D* travels up and down. The movable member *D* carries a horizontal cutter-arbor having a gang of three cutters *I* and *G* on each end. In the center of this arbor is a bevel gear which meshes with another bevel gear carried by a vertical

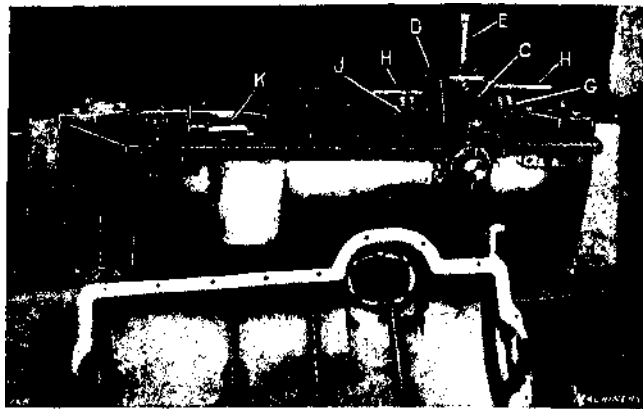


Fig. 22. Jig in Position for Drilling and Milling Operations

shaft, the upper end of which terminates in a Morse taper shank *E*. The movable member *D* is held normally in the upper position by springs.

In operation, the drill spindle is brought down in contact with the taper shank *E* until it is seated into the taper drill socket. Then the drill spindle is rotated, and the milling arbor, of course, rotates also through the bevel gears. The drill spindle is fed downward the same as for drilling, and in so doing the entire member *D* is lowered until the right-hand set of cutters *G* is brought into contact with the boss to be milled at the right-hand side of the crankcase. The cutters continue to be lowered until they come against a previously set stop, in which position the milling of the right-hand boss is completed.